

Temperature adjusting device for thermal fluid medium

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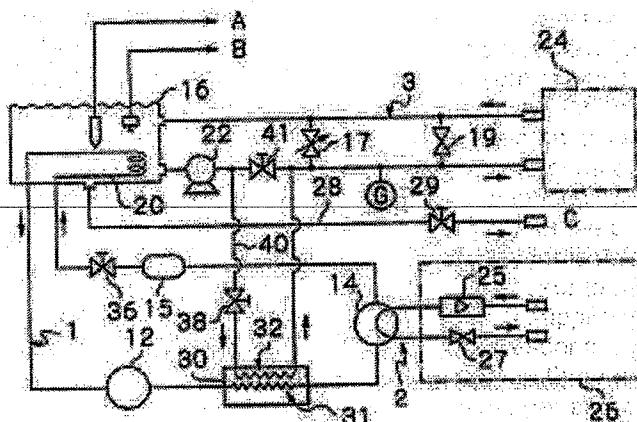
US2001003347 (A1)

US6349552 (B2)

KR20010062194 (A)

Abstract of TW 522214 (B)

To the object of the present invention is to provide a temperature adjusting device for thermal fluid medium of which temperature adjustment range is expanded for an automatic vending machine, wherein an electrical power energy at the time of starting operation is reduced and its cooling mode and heating mode can be changed over. The solution of the present invention is that a heat exchanger is arranged in a circuit ranging from a compressor to a condenser, wherein its primary side circuit is applied as a circuit ranging from the compressor to the condenser. A first bypass circuit (passing through a secondary side circuit of the heat exchanger and circulating back to the thermal medium fluid circulation circuit) is installed at a downstream side of a pump. Temperature of the thermal medium fluid is controlled under the application of a flow rate control valve. Further, a second bypass circuit connected from the downstream side of the condenser to the downstream side of an evaporator is installed. Both a capillary tube and a solenoid valve are arranged in the second bypass circuit, the cooling temperature is controlled and an over-heating of the compressor is prevented.



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A compressor control system and a cooling system

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Classification:

- international: F04C28/00; F04C23/00; F04C28/18; F04C28/24; F04C28/26; F04C28/28; F04C29/04; F25B1/04; F25B49/02; F04C18/02; F25B5/02; F04C23/00; F04C28/00; F04C29/04; F25B1/04; F25B49/02; F04C18/02; F25B5/00; (IPC1-7): F25B49/02

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EP1241417 (A1)

EP1241417 (B1)

US2002157409 (A1)

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Abstract of TW 539836 (B)

A cooling system controller controls the capacity of a variable capacity compressor based upon the temperature of a housing being cooled, the suction pressure of the compressor or both of these criteria.

The cooling system controller is capable of controlling either single-evaporator or multiple-evaporator refrigeration systems. The multiple-evaporator systems can have evaporators of similar temperatures or of mixed temperatures. The controller also allows the use of one or more condenser fans that are operated in a lead/lag fashion to control the cooling capability of the system.

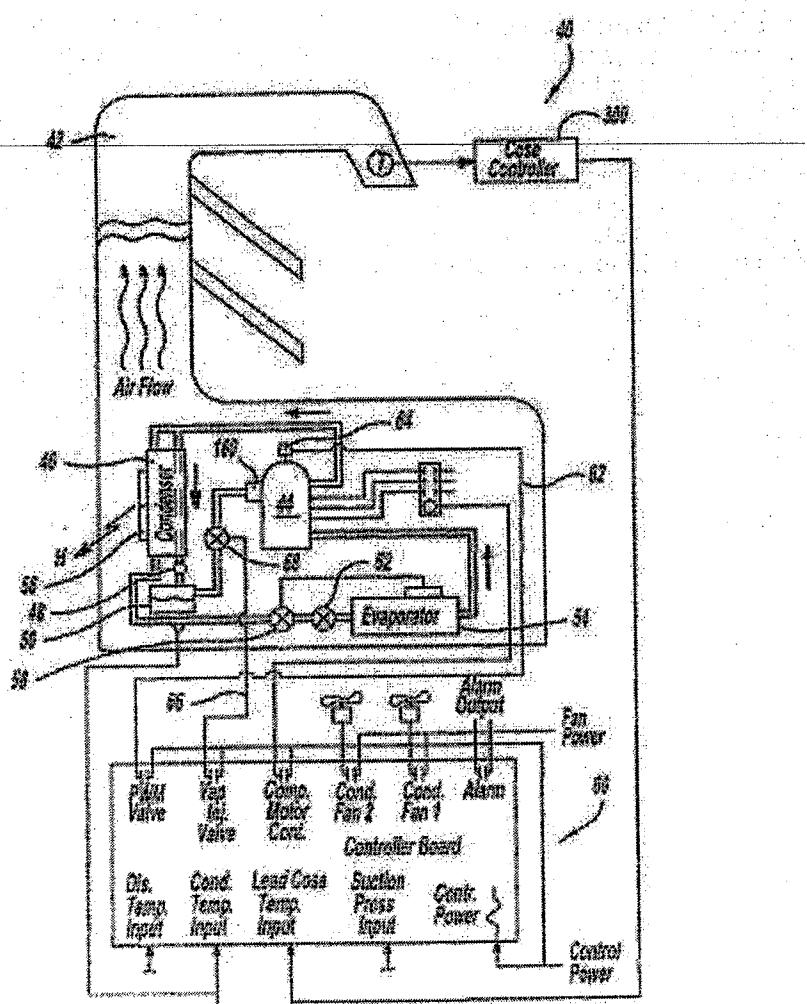


Figure 2

Process gas supply system and process gas supplying method

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JP9298171 (A)

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- international: C23C16/44; C23C16/448; H01L21/00; H01L21/205; H01L21/285; C23C16/44; C23C16/448; H01L21/00; H01L21/02; (IPC1-7): H01L21/00

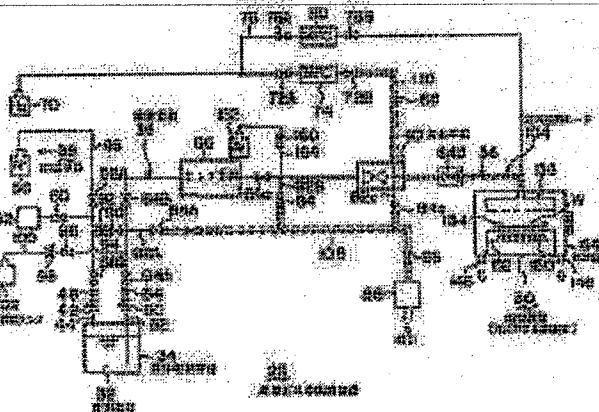
- European:

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Abstract of TW 425599 (B)

The invention relates to a process gas supply system and a process gas supplying method for supplying vaporised highly viscous liquid for use in semiconductor manufacturing devices and the like. The process gas supplying system of this invention comprises: a supply source for containing a liquid organic aluminum compound which has lowered viscosity due to an oxide; a supply piping for connecting the supply source and a processing device used for film processing of a target object to be processed by the organic aluminum compound; a pressurized delivering device for delivering under pressure the organic aluminum compound contained in the supply source to the supply piping; and a vaporizing device provided on the supply piping for vaporizing the liquid organic aluminum compound that was supplied under pressure. Also, the process gas supplying method of this invention is characterized by: lowering the viscosity of a liquid organic aluminum compound with the use of an oxide; delivering under pressure the organic aluminum compound with lowered viscosity to a supply piping; forming the process gas by vaporizing the liquid organic aluminum compound that was supplied under pressure to the supply piping by means of a vaporizing device; providing the process gas to a processing device via the supply piping for film processing of a target object to be processed by the organic aluminum compound.



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